

NOTICE OF OFFICE OF MANAGEMENT AND BUDGET ACTION

Diana Hynek
Departmental Paperwork Clearance Officer
Office of the Chief Information Officer
14th and Constitution Ave. NW.
Room 6625
Washington, DC 20230

08/06/2004

In accordance with the Paperwork Reduction Act, OMB has taken the following action on your request for approval of a new information collection received on 05/13/2004.

TITLE: Socio-economic Assessment of Marine Protected Areas Management Preferences

AGENCY FORM NUMBER(S): None

ACTION : APPROVED WITHOUT CHANGE

OMB NO.: 0648-0494

EXPIRATION DATE: 08/31/2005

BURDEN:	RESPONSES	HOURS	COSTS(\$,000)
Previous	0	0	0
New	700	700	0
Difference	700	700	0
Program Change		700	0
Adjustment		0	0

TERMS OF CLEARANCE:

Under the terms of 5 CFR 1320.10(c), this collection is approved for one year. In its future submission for a full three year clearance, the agency must include information about the collection activities performed to that point, including actual response rates in each sampling strata and other feedback received from the respondents.

OMB Authorizing Official	Title
Donald R. Arbuckle	Deputy Administrator, Office of Information and Regulatory Affairs

PAPERWORK REDUCTION ACT SUBMISSION

Please read the instructions before completing this form. For additional forms or assistance in completing this form, contact your agency's Paperwork Clearance Officer. Send two copies of this form, the collection instrument to be reviewed, the supporting statement, and any additional documentation to: Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 10102, 725 17th Street NW, Washington, DC 20503.

1. Agency/Subagency originating request	2. OMB control number b. <input type="checkbox"/> None a. _____ - _____
3. Type of information collection (<i>check one</i>) a. <input type="checkbox"/> New Collection b. <input type="checkbox"/> Revision of a currently approved collection c. <input type="checkbox"/> Extension of a currently approved collection d. <input type="checkbox"/> Reinstatement, without change, of a previously approved collection for which approval has expired e. <input type="checkbox"/> Reinstatement, with change, of a previously approved collection for which approval has expired f. <input type="checkbox"/> Existing collection in use without an OMB control number For b-f, note Item A2 of Supporting Statement instructions	4. Type of review requested (<i>check one</i>) a. <input type="checkbox"/> Regular submission b. <input type="checkbox"/> Emergency - Approval requested by _____ / _____ / _____ c. <input type="checkbox"/> Delegated 5. Small entities Will this information collection have a significant economic impact on a substantial number of small entities? <input type="checkbox"/> Yes <input type="checkbox"/> No 6. Requested expiration date a. <input type="checkbox"/> Three years from approval date b. <input type="checkbox"/> Other Specify: _____ / _____
7. Title	
8. Agency form number(s) (<i>if applicable</i>)	
9. Keywords	
10. Abstract	
11. Affected public (<i>Mark primary with "P" and all others that apply with "x"</i>) a. <input type="checkbox"/> Individuals or households d. <input type="checkbox"/> Farms b. <input type="checkbox"/> Business or other for-profit e. <input type="checkbox"/> Federal Government c. <input type="checkbox"/> Not-for-profit institutions f. <input type="checkbox"/> State, Local or Tribal Government	12. Obligation to respond (<i>check one</i>) a. <input type="checkbox"/> Voluntary b. <input type="checkbox"/> Required to obtain or retain benefits c. <input type="checkbox"/> Mandatory
13. Annual recordkeeping and reporting burden a. Number of respondents _____ b. Total annual responses _____ 1. Percentage of these responses collected electronically _____ % c. Total annual hours requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____	14. Annual reporting and recordkeeping cost burden (<i>in thousands of dollars</i>) a. Total annualized capital/startup costs _____ b. Total annual costs (O&M) _____ c. Total annualized cost requested _____ d. Current OMB inventory _____ e. Difference _____ f. Explanation of difference 1. Program change _____ 2. Adjustment _____
15. Purpose of information collection (<i>Mark primary with "P" and all others that apply with "X"</i>) a. <input type="checkbox"/> Application for benefits e. <input type="checkbox"/> Program planning or management b. <input type="checkbox"/> Program evaluation f. <input type="checkbox"/> Research c. <input type="checkbox"/> General purpose statistics g. <input type="checkbox"/> Regulatory or compliance d. <input type="checkbox"/> Audit	16. Frequency of recordkeeping or reporting (<i>check all that apply</i>) a. <input type="checkbox"/> Recordkeeping b. <input type="checkbox"/> Third party disclosure c. <input type="checkbox"/> Reporting 1. <input type="checkbox"/> On occasion 2. <input type="checkbox"/> Weekly 3. <input type="checkbox"/> Monthly 4. <input type="checkbox"/> Quarterly 5. <input type="checkbox"/> Semi-annually 6. <input type="checkbox"/> Annually 7. <input type="checkbox"/> Biennially 8. <input type="checkbox"/> Other (describe) _____
17. Statistical methods Does this information collection employ statistical methods <input type="checkbox"/> Yes <input type="checkbox"/> No	18. Agency Contact (person who can best answer questions regarding the content of this submission) Name: _____ Phone: _____

19. Certification for Paperwork Reduction Act Submissions

On behalf of this Federal Agency, I certify that the collection of information encompassed by this request complies with 5 CFR 1320.9

NOTE: The text of 5 CFR 1320.9, and the related provisions of 5 CFR 1320.8(b)(3), appear at the end of the instructions. *The certification is to be made with reference to those regulatory provisions as set forth in the instructions.*

The following is a summary of the topics, regarding the proposed collection of information, that the certification covers:

- (a) It is necessary for the proper performance of agency functions;
- (b) It avoids unnecessary duplication;
- (c) It reduces burden on small entities;
- (d) It used plain, coherent, and unambiguous terminology that is understandable to respondents;
- (e) Its implementation will be consistent and compatible with current reporting and recordkeeping practices;
- (f) It indicates the retention period for recordkeeping requirements;
- (g) It informs respondents of the information called for under 5 CFR 1320.8(b)(3):
 - (i) Why the information is being collected;
 - (ii) Use of information;
 - (iii) Burden estimate;
 - (iv) Nature of response (voluntary, required for a benefit, mandatory);
 - (v) Nature and extent of confidentiality; and
 - (vi) Need to display currently valid OMB control number;
- (h) It was developed by an office that has planned and allocated resources for the efficient and effective management and use of the information to be collected (see note in Item 19 of instructions);
- (i) It uses effective and efficient statistical survey methodology; and
- (j) It makes appropriate use of information technology.

If you are unable to certify compliance with any of the provisions, identify the item below and explain the reason in Item 18 of the Supporting Statement.

Signature of Senior Official or designee

Date

Agency Certification (signature of Assistant Administrator, Deputy Assistant Administrator, Line Office Chief Information Officer, head of MB staff for L.O.s, or of the Director of a Program or StaffOffice)	
Signature	Date
Signature of NOAA Clearance Officer	
Signature	Date

SUPPORTING STATEMENT

Socio-economic Assessment of Marine Protected Areas Management Preferences

A. JUSTIFICATION

1. Explain the circumstances that make the collection of information necessary.

The failure of existing management policies to adequately protect, restore and manage coral reef resources and habitats requires the use of novel management approaches. The use of spatial management measures such as marine protected areas (MPAs) is currently being advanced as a new and proactive way to rebuild overexploited stocks, preserve and restore sensitive habitats, conserve biodiversity, and buffer against management mishaps. To ensure the sustainable use coral reef resources and habitats, the Caribbean Fishery Management Council (CFMC) is considering establishing a network of MPAs.

The National Marine Fisheries Service (NMFS) proposes to conduct a survey to collect socio-economic data to strengthen the management, protection, and conservation of marine living resources and coral reef habitats in the U.S. Caribbean (Puerto Rico and US Virgin Islands). The information collected will assist decision-makers by examining the past performance of existing MPAs and expected performance of future MPAs. MPAs are formally defined as any area of the marine environment that has been reserved by Federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein. The information collected will also be used to establish community indices of dependence and engagement on fisheries and to provide a basis to predict the impacts of proposed regulations.

The Magnuson-Stevens Act (MSA, particularly National Standard 8, NS 8), National Environmental Protection Act (NEPA), and Executive Order (EO) 12898 (*Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*) require that social impact analyses be conducted when federal agencies propose new regulations. In turn, these analyses require the use of social and cultural baseline data for the various user groups in the fishery, including descriptions of the commercial, for-hire, recreational and subsistence fishing sectors. The requirements of the MSA mandate that the CFMC assesses, specifies and describes the likely effects of proposed regulations on fishermen and their communities. In deciding among management and conservation alternatives the CFMC is required to consider, *inter alia*, “historical fishing practices in, and dependence on, the fishery, the economics of the fishery, the capability of fishing vessels used in the fishery to engage in other fisheries, and the cultural and social framework relevant to the fishery and any affected fishing communities”.

Under NS 8 of the MSA, federal agencies are required to consider whether fishing communities are “...substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and United States fish processors that are based in such community”, with a fishing community specified as “...a social or economic group whose members reside in a specific

location and share a common dependency on commercial, recreational, or subsistence fishing or on directly related fisheries dependent services and industries (for example, boatyards, ice suppliers, tackle shops)". Executive Order 12866 requires regional fishery management councils to conduct an economic analysis of the benefits and costs to society of each of the regulatory options. To the extent possible any changes in regulation should be quantified in terms of net national benefits, the effects on various user groups, and the effect on small business entities. Under the Regulatory Flexibility Act (RFA), a determination shall be made whether a proposed rule has a significant impact on a substantial number of small entities that are to be directly regulated. For RFA purposes, a change in short-term accounting profits is an important criterion to determine significant economic impacts for small entities. Executive Order 12898, requires federal agencies to address environmental justice concerns by identifying "disproportionately high and adverse human health and environmental effects...on minority populations and low-income populations." Last, National Environmental Policy Act (NEPA) requires a determination of whether Federal actions significantly affect the quality of the human environment.

Despite NMFS' efforts to build social science capacity in the Southeast region, current staff levels do not make possible to conduct large scale in-house data collection programs. Similarly, the CFMC lacks social scientists to compile and analyze socio-economic data. Therefore, no comprehensive program to collect baseline social and community data is in place to help develop comprehensive analyses during the preparation of fishery management plans and amendments. While sporadic socio-economic studies have been conducted in the region, the majority of this research was driven by specific management concerns and was limited in geographic scope. Moreover, a significant share of this research is now outdated and is inadequate to meet the new legal definitions and requirements put forth by MSA, NEPA, and EOs 12898 and 12866. Because of specific nature of these legal mandates, there is an urgent need to conduct new research consistent with these new definitions and guidelines. Assessments of social impacts on fishing communities cannot be conducted with confidence without the ability to identify fishing communities and describe their participation in the region's fisheries.

Developing methodologies to operationally define and identify fishing communities and assess community impacts is a complex undertaking. NS 8 of the MSA, for example, establishes community as a location-based definition, not gear-based or ethnographic-based definition. In addition, NS 8 distinguishes between 'substantially dependent' and 'substantially engaged' fishing communities. Substantially dependent implies that loss of access may lead to some change in the character of the community, perhaps a major change, or may even threaten its existence. Substantially engaged, on the other hand, implies participation in a commercial, recreational, or subsistence fishery. Engaged is defined to include harvesting and/or processing activities. In contrast, EO 12898 stresses the need to assess differential impacts on community sub-groups; which opens the door to combine *place* and *non-place* driven categorizations. Anthropological and sociological methods can provide valuable insights how to better identify and characterize these communities and assess community impacts.

The proposed data collection is necessary to develop science-based criteria and protocols to identify and evaluate the economic impacts of management decisions. The information will be

used to protect the sustainable use of estuarine and marine ecosystems for present and future generations. The information collected will also be used to satisfy legal mandates under National Marine Sanctuaries Act, National Wildlife Refuge Administration Act, Coastal Zone Management Act, and other pertinent acts, regulations, and statutes as described above. The proposed data collection will partially fill the cultural, economic and social data void in the region. In-person interviews and questionnaires will be used to gather economic and socio-demographic information needed to evaluate the various conservation and management proposals. Survey information will be linked to existing commercial databases to develop suitable models to examine socio-economic consequences diverse regulatory actions.

2. Explain how, by whom, how frequently, and for what purpose the information will be used. If the information collected will be disseminated to the public or used to support information that will be disseminated to the public, explain how the collection complies with all applicable Information Quality Guidelines.

A one time survey will be used to collect socioeconomic data on the US Caribbean fishermen (and their communities) and their experiences with marine protected areas and seasonal closures. Private contractors have been hired to conduct these voluntary, in-person interviews. Presently, there are three teams who have been awarded contracts to conduct the proposed work. While these teams will work in separate geographic areas, they are will be collaborating together (and with NMFS) standardizing various survey instruments and protocols. Impact Assessment Inc. will be operating in the islands of St. Thomas and St. John, USVI; University of Puerto Rico will be operating in the island of St. Croix, USVI; and Aguirre International will be operating in Western Puerto Rico. We anticipate having a fourth team who will be conducting similar work in Eastern Puerto Rico. . We anticipate receiving additional resources to fund the Eastern Puerto Rico leg in 2004. The name of this fourth team is presently unknown as we plan to place another contract under competitive bid early 2004.

Fishers will be contacted through a combination of random sampling from a recent fisher census and licensing information, and area probability (cluster) sampling. A total of 700 interviews will be completed in the three strata (Puerto Rico, St. Thomas/St. John and St. Croix). We anticipate that 75% of these interviews will be with commercial fishers and 25% of the interviews will be with non-commercial fishers (e.g. recreational fishers, charter boat captains, divers, etc.). The emphasis on commercial fishers is due to the fact that they are the group most experienced with marine protected areas and seasonal closures.

The information sought will be of practical use since NMFS social scientists will utilize for descriptive and analytical purposes. In addition, the information collected will be used for the development of natural resource plans. The survey will collect demographic, cultural, economic and social information, which otherwise would be unavailable. Although Puerto Rico's Department of Natural and Environmental Resources and US Virgin Islands Division of Fish and Wildlife conduct fishermen census, which collect information on number of active fishermen, hours fished, species targeted, vessel characteristics, and gears used, these census data is too general to a) characterize fishing communities in particular their level dependence and engagement on marine resources and b) assess and describe fishing communities experience with marine protected areas and seasonal closures.

The proposed questionnaire will collect social, cultural, and economic information on fishermen and their households and their experience with MPAS. The instrument has seven sections: 1) fishing history and current practices, 2) disposition of the catch; 3) crew size & composition/ fishing companions, 4) vessel & gear information, 5) household, demographic, and employment information, 6) community dimensions of fishing, and 7) Management Issues.

Fishing history and current practices section elicits information about the type of fisher being interviewed, number of years involved in fishing, changes in fishing and community, his/her primary access port, annual rounds (gears used, species targeted, territories fished, distance from shore, trip duration, and value of catch by month), and marketing behaviors. This information is necessary to provide a profile of fishing practices and how they vary from community to community, in order to determine how different regulations might affect fishing from different ports and fishers from different communities. It will also provide information on how people adapt to change, including the social, cultural, and human capital that derive from multiple livelihoods and make adaptation possible.

Disposition of the catch section inquires about own consumption rates, percentage of the catch sold and points of sale. This information will enable to determine subsistence levels and will provide an understanding of formal and informal marketing channels. This information coupled with the annual round information collected in the earlier section could improve managers' decision-making. From key informants, we know that many fishermen work in construction for a few months to pay for social security. Thus, if managers were to impose a closed season, thorough information on fishermen's seasonal participation in fishing and non-fishing activities could be used to select the appropriate season and season length as to minimize adverse economic impacts on the industry.

Crew Size & Composition/ Fishing Companions section elicits information on the social make up of fishing parties, methods of sharing catch or paying crew, and crew members' dependence on fishing. This information will enable an estimate of the extent to which each fishing operation or involves more than one household, contributing to an estimate of dependence and engagement by community, as well as assist in our understanding of labor relations, labor processes, and collective action in the fishery.

Vessel & Gear Information is a section designed primarily to determine whether or not fishers rely on local suppliers and service personnel for the acquisition of vessels and gear, thus providing an indication of multiplier effects of the different fisheries. It elicits information on the character of the vessel and gear and its value. Besides providing valuable descriptive information, data on vessel and equipment characteristics and usage will help to explain profitability and productivity differences among fishermen. Variables such as vessel size, horsepower, and engine types are important determinants of revenue and productivity since they enhance fishermen's ability to locate and catch fish more swiftly. Detailed knowledge of capital investment will not only help us understand how marine reserves have affected fisherman's bottom line but will also help us understand their (fishery) entry-exit behavior decisions. Last, a capital investment inventory will provide useful information on the level of capacity utilization in the fishery.

Household, Demographic, and Employment Information section elicits information on the respondent and his/her household size, composition, and the members' ages, marital statuses, educational levels, employment, and role in the fishing operation. It also elicits information on home ownership as a measure of attachment to community, job change/ migration as a response to local economic growth or decline, and occupational multiplicity and history. Fisheries throughout the Caribbean and elsewhere in the United States tend to be household-based economic enterprises, with the size and composition of the household influencing such factors as the subjective value of fishing labor and the amount and type of gear in use. Households are also often the source of social network ties between fisheries and other coastal industries.

Community Dimensions of Fishing elicits information about association memberships, participation in community celebrations/ activism, and knowledge of conflicts. These questions will also allow us to estimate the extent to which communities are non-place-based entities and also further identify fishermen social networks.

Governance. These questions will be of predictive value to managers as they attempt to implement new regulations, as well as reveal native perceptions of the value of different fishery regulations. This section will not only solicit information on their experience with marine protected areas and closed areas but other management tools as well. This will permit to better contextualize the information collected. Given the likely heterogeneity in socio-economic background and fishing practices, we may expect that fishermen may react differently to the same management alternative. Native points of view (often called “emic” views) are important to managers as they justify implementing new regulations.

The aim of each of the seven sections is to provide different dimensions of fishing behavior. Aggregate data from the survey instrument can then be used to estimate the differential impact of marine protected areas on fishermen. The data can also be used to estimate *dependence* and *engagement* on a community by community basis, as well as provide coastal managers with tools to predict the social, cultural, and economic impacts of proposed regulations. In addition, through the collection of occupational data and information on social capital, cultural capital, and human capital available in the fisheries, managers can better predict how changes in the fisheries are likely to affect industries that are related to the fisheries through network ties.

It is anticipated that the information collected will be disseminated to the public or used to support publicly disseminated information. As explained in the preceding paragraphs, the information gathered has utility. NOAA Fisheries will retain control over the information and safeguard it from improper access, modification, and destruction, consistent with NOAA standards for confidentiality, privacy, and electronic information. See response #10 of this Supporting Statement for more information on confidentiality and privacy. The information collection is designed to yield data that meet all applicable information quality guidelines. Prior to dissemination, the information will be subjected to quality control measures and a pre-dissemination review pursuant to Section 515 of Public Law 106-554.

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological techniques or other forms of information technology.

The proposed survey will use voluntary, in-person interviews to collect the socio-economic data sought. In-person interviews are more versatile and less burdensome than mail and/or electronic questionnaires since they do not require the interviewees to reference their business records. Electronic data collection data methods such as email and/or Internet based questionnaires maybe unsuitable given the limited access to these technologies in some of the islands. We believe that requiring the use of automated electronic technologies will be taxing because it would force some fishermen to travel to distant locations where these information technologies are available. In addition, it would require many Spanish-speaking fishermen to learn English commands to operate these technologies. These activities will likely disrupt these fishermen's day-to-day fishing operations. We do not anticipate interviewers using laptops or other computers to directly enter the answers being provided because some of the survey questions are open ended. Thus, typing verbatim could extend the length of the interview, which will further burden the interviewees and may result in incomplete surveys. The data collected will not be available to the public over the Internet given its confidential nature.

4. Describe efforts to identify duplication.

We are only aware of two other efforts in US Caribbean waters. These efforts are being led by U.S. Virgin Islands Department of Planning and Natural Resources (Division of Fish and Wildlife) and MRAG Americas.

The U.S. Virgin Islands (USVI) Department of Planning and Natural Resources (Division of Fish and Wildlife) is completing their first ever fishermen census. The census is collecting information on the fishermen (e.g., name, age, and address), vessel characteristics (e.g., vessel length, horsepower, number of engines), number and description of gears used, catch handling, and perceptions of resource status. The census is expected to be completed on March 2004. The objective of both of these surveys is to describe the universe of fishermen to assist local fishery managers in tracking changes in fishing effort. The information collected on fishermen and their fishing operations does not contain economic data, which limits its contribution to socio-economic analysis of regulatory actions as mandated by MSFCMA. Different time frames, information needs, and analytical necessities prevented us from conducting our survey in conjunction with the USVI effort.

The other effort is being led by the MRAG Americas. MRAG Americas will be cooperatively working with the NMFS' Southeast Fisheries Science Center (Miami lab), the Puerto Rico Department of Natural and Environmental Resources (Fisheries Research Laboratory) and the USVI Department of Planning and Natural Resources (Division of Fish and Wildlife). The purpose of this project is to assess the potential for using capacity and/or effort reduction as components of the fisheries management strategy in the US Caribbean. The project consists of two rounds of workshops at three Puerto Rico (Cabo Rojo, San Juan, Humacao) and two US Virgin Islands (St. Croix, St. Thomas) locations. The first-round workshops will start with a series of short presentations on the status of various fish stocks, followed by an open-ended discussion on capacity and effort reduction programs, where fishermen can present their concerns and opinions, and request additional information. About a month later a second round of workshops will be offered. The second round is intended to reach a consensus among

participating fishers on various effort reduction options. Tentatively, the first (second) set workshops were proposed for March 29-April 2 (April 26-30).

To try to minimize the burden on fishermen, we held a meeting between MRAG and the researchers conducting the study on “Socio-economic Assessment of Marine Protected Areas Management Preferences” on November 11, 2003. During this meeting, the different groups discussed various mechanisms to better coordinate and integrate our research efforts in the area. Aguirre International and Impact Assessment, Inc. agreed to attend the workshops to ensure that the same fishermen are interviewed twice and, more importantly, to guarantee that valuable information on management preferences is not lost.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

Fishermen census data suggests that most commercial fishing operations are owner or family operated small businesses. We have taken several steps to minimize the burden to these small businesses. First, contractors will interview a fraction of the population. Fishermen not selected in the sample will not be contacted to participate in the survey. Second, surveys will be voluntary. Fishermen who do not wish to participate in the survey can choose not to partake. Third, surveys will be modified slightly to account for regional differences. Contractors will work with local authorities to ensure that the wording facilitates understanding and reflects local idioms. Furthermore, surveys will be available in English and Spanish to further reduce any burden to non-English speaking fishermen. Last, interviewers will conduct their surveys at times and places that are convenient to fishermen. This will minimize any potential disruption to fishermen’s fishing practices.

6. Describe the consequences to the Federal program or policy activities if the collection is not conducted or is conducted less frequently.

The proposed socio-economic survey will collect demographic, cultural, economic and social information about US Caribbean fisheries. If these data were collected less frequently or not at all, then CFMC would not be able to adequately satisfy the legal requirements of the MSA, NEPA, and EO 12898. These mandates require regional fishery management councils to establish conservation and management measures which take into account the importance of fishery resources to fishing communities in order to provide sustained fishing community participation and to minimize, to the extent possible, adverse economic impacts on such communities. Furthermore, these requirements also mandate that regional fishery management councils to establish conservation and management measures using the best available information.

The absence of detailed cultural, economic, and social information would prevent the identification of communities that are engaged and dependent on fishing and the estimation of adverse economic impacts on these communities. Management proposals would continue to be debated without sound information. Another consequence of not having the appropriate economic data could be court challenges on the grounds of inadequate analysis. Last, the

collection of detailed socio-economic data will, allow fishery managers to make timely and better-informed decisions by having the best scientific information available.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

There are no special circumstances that require the collection to be conducted in a manner inconsistent with OMB guidelines.

8. Provide a copy of the PRA Federal Register notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and record-keeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

A notice was published in the *Federal Register* on Wednesday, December 17, 2003 (Vol. 68, No. 242, pp. 70233-70234) soliciting public comments regarding the data collection process.

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration [I.D. 121203A]

Proposed Information Collection; Comment Request; Socio-economic Assessment of Marine Protected Areas Management Preferences

AGENCY: National Oceanic and Atmospheric Administration (NOAA).

ACTION: Notice.

SUMMARY: The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995, Public Law 104-13 (44 U.S.C.3506(c)(2)(A)).

DATES: Written comments must be submitted on or before February 17, 2004.

ADDRESSES: Direct all written comments to Diana Hynek, Departmental Paperwork Clearance Officer, Department of Commerce, Room 6625, 14th and Constitution Avenue, NW, Washington, DC 20230 (or via the Internet at dHynek@doc.gov).

FOR FURTHER INFORMATION CONTACT:

Requests for additional information or copies of the information collection instrument and instructions should be directed to Dr. Juan Agar, Department of Commerce, NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center, 75 Virginia Beach Drive, Miami, FL 33149, (305 361 4218).

SUPPLEMENTARY INFORMATION:

I. Abstract

The National Marine Fisheries Service proposes to conduct a survey to collect socio-economic data to strengthen the management, protection, and conservation of existing and proposed Marine Protected Areas (MPAs) in the U.S. Caribbean (Puerto Rico and U.S. Virgin Islands). MPAs are any area of the marine environment that has been reserved by Federal, State, territorial, tribal, or local laws or regulations to provide lasting protection for part or all of the natural and cultural resources therein. The survey intends to collect demographic, cultural, and economic information from communities that are dependent on the estuarine and marine resources for their livelihood. The proposed data collection is necessary to develop science-based criteria and protocols to identify and evaluate the economic impacts of management decisions. The information will be used to protect the sustainable use of estuarine and marine ecosystems for present and future generations. The information collected will also be used to satisfy legal mandates under Executive Order 13158, the Magnuson-Stevens Fishery Conservation Act, the

National Marine Sanctuaries Act, the National Wildlife Refuge Administration Act, the Coastal Zone Management Act, the National Environmental Policy Act, and other pertinent statutes.

II. Method of Collection

The socio-economic information will be collected via personal interviews and mail surveys.

III. Data

OMB Number: None.

Form Number: None.

Type of Review: Regular submission.

Affected Public: Business and otherfor-profit organizations.

Estimated Number of Respondents: 700.

Estimated Time Per Response: 1 hour.

Estimated Total Annual BurdenHours: 700.

Estimated Total Annual Cost toPublic: \$0.

IV. Request for Comments

Comments are invited on: (a) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology. Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Dated: December 10, 2003.

Gwellnar Banks,

Management Analyst, Office of the Chief

Information Officer.

[FR Doc. 03-31139 Filed 12-16-03; 8:45 am]

BILLING CODE 3510-22-S

No public comments were received.

8b) Results of consultations with persons outside the agency:

A series of phone conversations were conducted SEFSC staff and the Puerto Rico Department of Natural and Environmental Resource (Fisheries Research Laboratory) and the USVI Department of Planning and Natural Resources (Division of Fish and Wildlife). The objective of these conversations was to explain the objectives of the proposed work as well as request various databases such as the Puerto Rico and USVI Fishermen Censuses and Puerto Rico Commercial Fishermen License Registration.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

No payments or gifts will be provided to questionnaire respondents.

10. Describe any assurance or confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

Survey respondents will be advised that any information provided will be considered private and will be treated as confidential in accordance with NOAA Administrative Order 216-100, Confidential Fisheries Statistics. It is Agency's policy not to release confidential data, other than in aggregate form, as the MSFMCA protects the confidentiality of those submitting data. Whenever data are requested, the Agency will ensure that information identifying the pecuniary

business activity of a particular individual is not identified. Only group averages or group totals will be presented in any reports, publications, or oral presentations of the study's results.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

No questions will be asked about sexual behavior and attitudes, religious beliefs, or other similar matters of a personal and sensitive nature.

12. Provide an estimate in hours of the burden of the collection of information.

Experienced contractors will conduct voluntary, one-time, and in-person interviews using OMB approved questionnaires. The statistical design calls for 700 surveys in three strata (Puerto Rico, St. Thomas/St. John and St. Croix). We estimate that, on average, 1.0 hour is needed to complete the survey. This estimate is based on contractors past experience conducting similar surveys. Based on the above data, the estimated total number of burden hours is 700 (see table below).

Respondents	Burden hours
Number of Respondents	700
Number of Responses per respondent	1
Time per interview (hours)	1
Total Burden (hours)	700

13. Provide an estimate of the total annual cost burden to the respondents or record-keepers resulting from the collection (excluding the value of the burden hours in #12 above).

Other than 700 hours listed in question 12, the survey does not impose any burden (costs) to the respondents resulting from the data collection. This voluntary in-person survey will be conducted in the field.

14. Provide estimates of annualized cost to the Federal government.

We estimate that contractors will perform the data collection and analysis at a cost of \$ 460,000. This number is an estimate because, as we discussed earlier, we anticipating receiving funds to complete the Eastern Puerto Rico leg of the study. The costs include the development of survey instrument, training interviewers, printing of forms, data collection and processing, quality control, data entry and supervision. Additional federal costs include the time of NMFS staff. The NMFS staff will be responsible for developing and administering the contract and collaborating with the development of the survey.

15. Explain the reasons for any program changes or adjustments reported in Items 13 or 14 of the OMB 83-I

The program change is for the collection of new socio-economic data.

16. For collections whose results will be published, outline the plans for tabulation and publication.

Data collected will be used to a) describe fishing communities' level of engagement and dependence on marine living resources, b) assess the performance of area and season closures, and c) evaluate the socio-economic impacts of proposed regulatory actions. Descriptive and analytical reports will include summaries of data and will not release or reveal confidential information. Depending on the availability of funds, we anticipate that reports will be available January 2006. These reports will likely be available in *pdf* format in the Southeast Fisheries Science Center's (NOAA Fisheries) home pages.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

The OMB control number and expiration date will be displayed.

18. Explain each exception to the certification statement identified in Item 19 of the OMB 83-I.

There are no exceptions to the certification statement.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

- 1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g. establishments, State and local governmental units, households, or persons) in the universe and the corresponding sample are to be provided in tabular form. The tabulation must also include expected response rates for the collection as a whole. If the collection has been conducted before, provide the actual response rate achieved.**

The potential respondent universe included commercial, professional recreational (charter boat fishermen), recreational, and subsistence fishermen in the US Caribbean (Puerto Rico and USVI). Lists of fishers are available from Puerto Rico Fisher Census collected by Puerto Rico's Department of Natural and Environmental Resources and from trip ticket information collected by USVI Department of Planning and Natural Resources. Although these databases are adequate for initiating sampling, they are inadequate for capturing the full range of active participants in fishing communities. We will use them in combination with cluster sampling methods. Cluster sampling methods are frequently used to sample populations that are difficult to count. Cluster sampling consists of sampling in stages, selecting significant clusters (e.g. fishing

neighborhoods, landing centers, fishing associations), and interviewing a small number of randomly selected individuals in each cluster. For a more representative sample, one selects more clusters than individuals per cluster; thus, for a sample of 100, we would select 20 clusters and administer the survey to 5 individuals per cluster. The clusters themselves will be determined during the cultural mapping phase of the project.

The population of licensed US Caribbean commercial fishermen consists of approximately 1620 individuals (1,200 in Puerto Rico and 420 in USVI). The total number of non-commercial fishers (i.e., charter operators, divers, etc.) is poorly known; however, we conservatively estimate that number to be around 300 (250 Puerto Rico and 50 in USVI). Drawing on the survey experience of our contractors, we conservatively estimate that 75% of the respondents would participate in this voluntary survey. We intend to survey 400 fishers in Puerto Rico: 200 located through the use of current lists of fishers and 200 through cluster sampling. We also intend to sample 300 fishers in UVI: 150 located through the use of current lists of fishers and 150 through cluster sampling.

Area	Population Size	Survey Sample	Expected Response Rate	Target Number of Surveys per Strata
Puerto Rico	1450	534	0.75	400
USVI	470	400	0.75	300
Total	1920			700

2. Describe the procedures for the collection, including: the statistical methodology for stratification and sample selection; the estimation procedure; the degree of accuracy needed for the purpose described in the justification; any unusual problems requiring specialized sampling procedures; and any use of periodic (less frequent than annual) data collection cycles to reduce burden.

Simple random sampling will be drawn from the Puerto Rico Fisher Census and USVI trip ticket information. We anticipate selecting 350 at random from all those listed living in the region. We will also select 350 through cluster sampling, which involves a mapping phase to locate significant clusters of fishing communities. These clusters can be neighborhoods, landing centers, fishing associations, etc. These clusters are then randomly selected, as described above. We anticipate that a sample of 700 constitutes about 30% of the total universe. The stratification is needed because otherwise, the sampling strategy could inadvertently marginalize or exclude some of the user groups.

The data collected will be used for descriptive and analytical purposes. Descriptive and analytical uses include the estimation of summary statistics of household composition, occupational multiplicity, and indexes of community dependence. The procedures for estimating these summary statistics and indexes will be based on the standard equations available in various statistical texts such as Thompson (see, Thompson, 1992. Sampling)

3. Describe the methods used to maximize response rates and to deal with non-response. The accuracy and reliability of the information collected must be shown to be adequate for the intended uses. For collections based on sampling, a special justification must be provided if they will not yield "reliable" data that can be generalized to the universe studied.

Several steps will be taken to maximize the response rates. First, the field team will be selected for their familiarity with fishing communities and practices. Second, trained interviewers will conduct in-person surveys at times and places that are convenient to fishermen. This will minimize any potential disruption to fishermen's fishing practices. Third, our contractor will work with local authorities to ensure that the wording facilitates understanding and reflects local idioms. Last, surveys will be available in English and Spanish to further reduce any burden to non-English speaking fishermen. To deal with non-response we will use call-backs and two-phase sampling procedures as describe in textbooks such as Lohr's. (see, Lohr's, S., 1998. Sampling: design and analysis). The sample size of 700 will provide reliable estimates of the levels of dependence and engagement of fishing communities on coral reef resources.

4. Describe any tests of procedures or methods to be undertaken. Tests are encouraged as effective means to refine collections, but if ten or more test respondents are involved OMB must give prior approval.

The contractor is required to pre-test the survey instrument in the field with 9 or less fishermen. The objective of the pre-test is to make the questionnaire clearer and easier to complete.

5. Provide the name and telephone number of individuals consulted on the statistical aspects of the design, and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Drs. Juan Agar and Brent Stoffle, social scientists employed by the NMFS, were consulted on the statistical design.¹ NMFS social scientists and CFMC staff will use the data for regulatory analysis.

¹Drs. Juan J. Agar and Brent Stoffle, Southeast Fisheries Science Center, National Marine Fisheries Service, Miami, Florida 33149. Telephone: 305-361-4200.

SURVEY INSTRUMENT

Interviewer Data	Location (Municipio & Port)	Date	Sex	Ethnicity	Comments

We are conducting a survey of fishers in the US Caribbean to better understand the different problems that you face, how you work together with other fishers to address those problems, how you respond to changes in fishery resources and to new regulations, and what you would like to see for the future. The study is designed to help identify communities involved in fishing, how life in such places is changing, and how different agencies and people can deal with those changes.

Everything we talk about will be confidential. When we finish our interviews and other work, we will write a report that summarizes everything we've learned. We don't use people's names in our reports, or write about anything that is sensitive. Participation in this survey is completely voluntary, and you do not need to answer any questions you do not wish to answer. If you agree that sounds okay and if you don't have any questions, I'd like to start by asking you a few basic questions about your fishing operation"

I'd like to start by asking you a few basic questions about your fishing:

I. Fishing History & Current Practices

- What kind of fishing do you mainly do now? (check)
☐ Commercial fishing captain or crew member
☐ Charter fishing boat captain or boat mate or deck hand
☐ Dive boat captain or crew member
☐ Recreational fishing boat captain or recreational crew
☐ Someone who fishes or dives for primarily for food
☐ Other (specify): _____
- How long have you fished? ____ ____ years
- Do any of your relatives fish (or dive) today? Y N (if yes, complete table)

Relationship	Primary Type of Fishing/Role

- Where do you mainly moor your (if you keep it at home, where do you launch it)?
Place of mooring: _____
Place of launching: _____

5. Is one or both of those associated with a:

- | | |
|--|-----------------------------|
| <input type="checkbox"/> Fishing association | <i>(mooring/ launching)</i> |
| <input type="checkbox"/> Club Nautico/ sportfishing club | <i>(mooring/ launching)</i> |
| <input type="checkbox"/> Commercial pier | <i>(mooring/ launching)</i> |
| <input type="checkbox"/> Public Beach | <i>(mooring/ launching)</i> |
| <input type="checkbox"/> Other | <i>(mooring/ launching)</i> |

6. How has fishing in your area has changed in the past ten years? *(e.g. are people using more, less, or different gear, targeting different species, different territories, fishing from boat vs. short, etc.)*

7. How has your community changed in the past ten years? *(e.g. has there been more development, increased tourism, changes in the industrial base, etc.?)*

8. How have people adapted to the change? *(e.g. have the changes presented new opportunities or caused people to find alternative employment, seek government help, reduce consumption, etc.?)*

9. I'd like now to ask several questions about your primarily and secondary species and gears:

Month	Gear	Species	Distance from shore	Number of trips / Duration	Habitat/ Territory*	Landings/Value** (n of passengers for charters)
January	Primary	Primary				
		Secondary				
	Secondary	Primary				
February	Primary	Primary				
		Secondary				
	Secondary	Primary				
March	Primary	Primary				
		Secondary				
	Secondary	Primary				
April	Primary	Primary				
		Secondary				
	Secondary	Primary				
May	Primary	Primary				
		Secondary				
	Secondary	Primary				
June	Primary	Primary				
		Secondary				
	Secondary	Primary				

*Probe: Are any of the habitats on or near coral reefs, Buoy 8/Tourmaline Bank, Buoy 6/Abril la Sierra Bank, or Bajo de Sico. [Use charts to assist with locating habitat/ territory]

**If recreational fishers, ask about sale of fish to cover trip costs. If charter boat captain, ask about the average number of passengers carried and their fees (how much per person).

Month	Gear	Species	Distance from shore	Number of trips/ Duration	Habitat/ Territory*	Landings/Value** (n of passengers for charters)
July	Primary	Primary				
		Secondary				
	Secondary	Primary				
		Secondary				
August	Primary	Primary				
		Secondary				
	Secondary	Primary				
		Secondary				
September	Primary	Primary				
		Secondary				
	Secondary	Primary				
		Secondary				
October	Primary	Primary				
		Secondary				
	Secondary	Primary				
		Secondary				
November	Primary	Primary				
		Secondary				
	Secondary	Primary				
		Secondary				
December	Primary	Primary				
		Secondary				
	Secondary	Primary				
		Secondary				

*Probe: Are any of the habitats on or near coral reefs, Buoy 8/Tourmaline Bank, Buoy 6/Abril la Sierra Bank, or Bajo de Sico? [Use charts to assist in locating habitat/ territory]

**If recreational fishers, ask about sale of fish to cover trip costs. If charter boat captain, ask about the average number of passengers carried and their fees (how much per person).

[If fisher used more than one gear]: Why do you change gears?

II. Disposition of the Catch

11. How much of your catch do you keep for you and your family to eat?

Less than 1/4 1/4 to 1/2 About 1/2 1/2 to 3/4 Almost all

12. How much of your catch do you give away?

Less than 1/4 1/4 to 1/2 About 1/2 1/2 to 3/4 Almost all

13. How much of your catch do you sell?

Less than 1/4 1/4 to 1/2 About 1/2 1/2 to 3/4 Almost all

14. Where do you sell your catch (check all that apply)?

<input type="checkbox"/> fishing association	<i>Less than 1/4</i>	<i>1/4 to 1/2</i>	<i>About 1/2</i>	<i>1/2 to 3/4</i>	<i>Almost all</i>
<input type="checkbox"/> private market	<i>Less than 1/4</i>	<i>1/4 to 1/2</i>	<i>About 1/2</i>	<i>1/2 to 3/4</i>	<i>Almost all</i>
<input type="checkbox"/> seafood restaurant	<i>Less than 1/4</i>	<i>1/4 to 1/2</i>	<i>About 1/2</i>	<i>1/2 to 3/4</i>	<i>Almost all</i>
<input type="checkbox"/> on street/ out of house	<i>Less than 1/4</i>	<i>1/4 to 1/2</i>	<i>About 1/2</i>	<i>1/2 to 3/4</i>	<i>Almost all</i>
<input type="checkbox"/> other	<i>Less than 1/4</i>	<i>1/4 to 1/2</i>	<i>About 1/2</i>	<i>1/2 to 3/4</i>	<i>Almost all</i>

III. Crew Size & Composition/ Fishing Companions

15. How many other people do you normally fish with?

16. How are these people related to you (e.g. by blood, marriage, through a fishing association, friends, etc.)?

Associate 1
Associate 2
Associate 3
Associate 4

17. How do you share the catch or money from the catch? *(describe share or pay arrangement)*

18. On your last trip, how much did you spend on:

Gas:
Oil & lube:
Ice:
Bait:
Food:
Other:

19. Do your crew members rely on commercial fishing for all, most, or some of their income?
(circle for each member)

Crew member 1:	<i>Less than 1/4</i>	<i>1/4 to 1/2</i>	<i>About 1/2</i>	<i>1/2 to 3/4</i>	<i>Almost all</i>
Crew member 2:	<i>Less than 1/4</i>	<i>1/4 to 1/2</i>	<i>About 1/2</i>	<i>1/2 to 3/4</i>	<i>Almost all</i>
Crew member 3:	<i>Less than 1/4</i>	<i>1/4 to 1/2</i>	<i>About 1/2</i>	<i>1/2 to 3/4</i>	<i>Almost all</i>

20. What other tasks or jobs do your crew members do (e.g. repairing or building gear, working in other non-fishing jobs, etc.)?

21. How hard is it to find crew?

Very hard 1 2 3 4 5 Not at all hard

22. [For sportfishers]: Do the fish you catch help pay your trip expenses? Y N

IV. Vessel & Gear Information

23. How many vessels do you own? ____

24. Vessel 1

Length of vessel		
Hull type		
Engine type & horsepower	Type:	HP:
Value		
Year of construction:	Y N	
Owner-operated?	Y N Hired Captain?	Hired Crew?
Impacts on Municipality	If any of following No:	Location:
Was the vessel built locally?	Y N	
Do you service the vessel locally?	Y N	
Do you service the engine locally?	Y N	
Do you buy your fishing gear locally?	Y N	
Do you buy electronics, navigational gear locally?	Y N	
Do you buy bait locally?	Y N	

25. Vessel 2

Length of vessel		
Hull type		
Engine type & horsepower	Type:	HP:
Value		
Year of construction:	Y N	
Owner-operated?	Y N Hired Captain?	Hired Crew?
Impacts on Municipality	If any of following No:	Location:
Was the vessel built locally?	Y N	
Do you service the vessel locally?	Y N	
Do you service the engine locally?	Y N	
Do you buy your fishing gear locally?	Y N	
Do you buy electronics, navigational gear locally?	Y N	
Do you buy bait locally?	Y N	

26. What is the current market value of all your fishing gear? \$ _____

27. Do you have any vessel, gear, or engine loans?

Vessel loan amount \$ _____

Gear loan amount \$ _____

Engine loan amount \$ _____

28. Do you pay to dock or store your vessel? Y N If so, how much? \$ _____

29. Do you have insurance on your vessel? Y N

Now we would like to ask a few questions about your family and household:

V. Household, Demographic, and Employment Information

Person	Relation	Age	MS	Ed	Primary & Secondary Employment*	Role in fishing operation/ angling**
Respondent <i>Native or Foreign-Born</i>	N.A.					
Person 1 <i>Native or Foreign-Born</i>						
Person 2 <i>Native or Foreign-Born</i>						
Person 3 <i>Native or Foreign-Born</i>						
Person 4 <i>Native or Foreign-Born</i>						
Person 5 <i>Native or Foreign-Born</i>						
Person 6 <i>Native or Foreign-Born</i>						
Person 7 <i>Native or Foreign-Born</i>						
Person 8 <i>Native or Foreign-Born</i>						
Person 9 <i>Native or Foreign-Born</i>						
Person 10 <i>Native or Foreign-Born</i>						

MS = Marital Status; Ed = Education (in years). *Probe for informal economic activities as well as whether or not employment involves migration. **For sportfishers, probe for those members of the household/ family who fish with them.

31. Approximately how many days per month do you fish and how many work the jobs listed above?

Month	J	F	M	A	M	Jn	Jl	A	S	O	N	D
Fishing												
Job 1												
Job 2												
Job 3												

32. How much of your total household income comes from fishing?

None Less than 1/4 1/4 to 1/2 About 1/2 1/2 to 3/4 Almost all

33. Do you believe the fish you catch reduces your weekly household food bill by:

\$0 \$5 \$10 \$20 \$30 \$40 \$50 \$60 \$70 \$80 \$90 >\$90

34. How is your family doing financially?

___Very poorly ___Poorly ___Average ___Well ___Excellent

35. Do you own outright, have a mortgage, or rent your house? *own mortgage rent*

36. Have you ever taken or quit a job because of fishing? Y N

Why?

37. Have you ever migrated for work? Y N

[note: "migration," different from commuting, implies moving to a location too far away to travel back and forth from in a day]

38. Has any other member of your family ever migrated for work? Y N

39. *[If yes to either question]:* Did you/ your family members migrate because the local economy could not support you or your family? Y N

VI. Community Dimensions of Fishing

40. Do you consider yourself part of a fishing community? Y N

If yes, how do you define community?

41. Are there any places or occasions where fishers and/or their families gather together? Y N

If yes, what places/ occasions: _____

42. Do you belong to any fishing association(s) (*e.g. cooperative, sportfishing club, marketing association, etc.*)? Y N

If yes, name of organization(s): _____

43. Do other members of your family belong to the same organization? Y N

If yes, which relatives: _____

44. Do you participate in events to celebrate or defend commercial fishing as a way of life? Y N

If yes, which activities? _____

45. Do you participate in activities to celebrate or defend sportfishing? Y N

If yes, which activities? _____

VII. Governance

46. How would you characterize the overall health of the fisheries in your area?

☐ Excellent ☐ Good ☐ Fair ☐ Poor ☐ Don't know

47. What do you believe are the main threats to the overall health of the fisheries in your area?

Please list in order of severity:

48. Of the habitats where you fish, are any at or near coral reefs? Y N

49. Could the fishing practices you are familiar with damage coral reefs in any of the following ways?

- ☐ Breakage of corals from traps
- ☐ Breakage of corals from nets
- ☐ Chemicals from motors, solvents, etc. on vessels
- ☐ Breakage from human contact (e.g. diving)

50. What changes in coral reefs have taken place because of these threats?

51. What strategies need to be adopted to better protect coral reef?

52. What are some activities directed toward conserving the marine environment in your area?
(e.g. reporting illegal dumping, watching for poaching, protecting mangroves and other nursery areas).

53. What are some of the conflicts over the marine environment in your area? (e.g. access conflict, territorial conflict, problem with a regulation, commercial-recreational conflict, etc.)

54. How good is compliance with fishery regulations in your area?

☐ Excellent ☐ Very Good ☐ Good ☐ Fair ☐ Poor ☐ No compliance ☐ Don't know

55. How often have you heard of people violating Marine Protected Area (MPA) regulations?

☐ Almost every trip ☐ On most trips ☐ Occasionally ☐ 1-2 trips per year ☐ Never

56. If there is weak compliance, please rank the following reasons: Rank (1 to 5)

- a. Weak enforcement/ limited enforcement resources
- b. Low chance of being detected
- c. Weak penalties/ fines
- d. People don't believe in regulations
- e. Other:

57. Have fished in area where the MPA is currently present? (Y/N)

58. Did the implementation of MPAs impact you? (Y/N)

59. If yes, how did the closures affect your fishing practices?

Using the following questions to probe.

- ¿I had to switch to different fishing grounds? From: _____ To: _____
¿I had to switch to other species? From: _____ To: _____
¿I had to switch to a new gear? Old gear: _____ New gear: _____
¿I had to find another job? Which _____
¿It changed my harvesting costs? They went from _____ to _____
¿It changed my marketing costs? Which and by how much? _____

60. What is the main group that benefits from the MPAs (*e.g. commercial fishers, tourists, recreational fishers, charter boat captains, etc.*)?

61. Do you feel the MPA is having an impact on the availability of local fresh seafood? Y/N
Why?

62. How has the MPA affected your community?

63. Did you support the MPA initially (Y/N)? Do you support it now (Y/N)?

64. Would you support additional MPAs? Where and why?

Many people believe that MPAs address the problems facing fisheries and marine environments in a number of ways. For each of the following solutions attributed to MPAs, please indicate whether you strongly agree (1), agree (2), are neutral (3), disagree (4), or strongly disagree (5).

65. Maintain and restore target species

Strongly agree 1 2 3 4 5 *Strongly disagree* DK

66. Protect exploited species at vulnerable sites and/or life histories

Strongly agree 1 2 3 4 5 *Strongly disagree* DK

67. Improve or sustain catches within the MPA

Strongly agree 1 2 3 4 5 *Strongly disagree* DK

68. Improve or sustain catches in adjacent fishing areas to the MPA

Strongly agree 1 2 3 4 5 *Strongly disagree* DK

69. Create social or economic hardships on communities dependent on fisheries

Strongly agree 1 2 3 4 5 *Strongly disagree* DK

70. Restore/maintain habitat quality

Strongly agree 1 2 3 4 5 *Strongly disagree* DK

71. Reduce conflicts over fishery resources

Strongly agree 1 2 3 4 5 *Strongly disagree* DK

72. Protect ecological processes essential for habitat existence.

Strongly agree 1 2 3 4 5 *Strongly disagree* *DK*

73. Minimize threats, damage and/or pressures to habitats inside and/or outside the MPA
Strongly agree 1 2 3 4 5 *Strongly disagree* *DK*

74. Maintain or enhance spawning aggregations
Strongly agree 1 2 3 4 5 *Strongly disagree* *DK*

75. Maintain and/or enhance livelihood opportunities for coastal residents and marine resource users
Strongly agree 1 2 3 4 5 *Strongly disagree* *DK*

76. How do you think that these stock sizes fared following the introduction of the MPA?

	Notable Decline (> 20%)		No change 0%		Notable increase >20%		
Losbter	1	2	3	4	5		DK
Grouper	1	2	3	4	5		DK
Snapper	1	2	3	4	5		DK
Queen conch	1	2	3	4	5		DK
Dolphin	1	2	3	4	5		DK
Tuna	1	2	3	4	5		DK

Other Fishery Regulations:

77. Were any of the following responsible for changes in your fishing practices over the past 10 years? (*check all that apply*).

Seasonal closure ___ Area closure ___ Change in licensing ___
 Gear restriction ___ Changes in stocks ___
 Access problem ___ Other regulation ___

78. Did that change result in a loss, gain, or no change in income? *Loss* *Gain* *No Change*

79. Did that change make your recreational activities better, worse, or no different?
Better *Worse* *No different*

80. For each of the following resource management actions, please indicate whether or not you are familiar with the action. For each management action you are familiar with, we would also like you to indicate how you believe the action would likely influence your fishing, on the following five point scale:

- 1 = the method would force me out of fishing altogether
- 2 = the method would significantly reduce my income from fishing
- 3 = the method would have little or no impact on my fishing
- 4 = the method would probably be beneficial to my fishing
- 5 = the method would greatly benefit my fishing

Limited Entry:
 Influence: Negative 1 2 3 4 5 Positive
 familiar with not familiar with

Seasonal Closures:

			familiar with			not familiar with		
Influence:	Negative	1	2	3	4	5	Positive	

Area Closures:

			familiar with			not familiar with		
Influence:	Negative	1	2	3	4	5	Positive	

Fishing Quotas:

			familiar with			not familiar with		
Influence:	Negative	1	2	3	4	5	Positive	

82. How would you characterize the future of fishing in your area? (e.g. will it improve in the long-run, after short-term difficulties, will it decline or disappear entirely, will it change in some significant way?)

83. Would you be willing to participate in a focus group or another interview?

☐ Yes, focus group.

☐ Yes, another follow-up interview.

☐ No.

If yes to either, please provide the following information:

Name: _____

Address of best place to meet: _____

Directions to above: _____

Phone: _____